

Appl. No. : 10/070,914
Filed : March 8, 2002

REMARKS

Figure 2b has been amended to include the reference number "23". Support for the amendment to Figure 2b can be found in the specification as filed, on page 5, lines 17-20 which states that "The electrode bridge area may typically be 20mm long and in use, as is discussed below, is sufficiently long to define an air gap 22 [Fig. 2b] between a piece of filter paper 23 or the like forming part of the bridge and the wall 18 which retains the rehydration solution." This clearly indicates that the cross-hatched square structure is a filter paper. Further, the Specification has been amended to include the reference number 43 in the description. Support for this amendment can be found in Figures 4a and 4b as filed.

Claim 13 was cancelled and the remaining claims amended to correct minor informalities. No new matter has been added herewith. The changes made to the Specification and Claims by the current amendment, including ~~deletions~~ and additions, are shown herein with deletions designated with a strikethrough and additions underlined. No new matter has been added herewith. As a result of the amendments, Claims 1-12 and 14-24 are presented for further examination.

Claim objections

Claim 14 was amended to include a period at the end of the claim.

Rejection under 35 U.S.C. §112, second paragraph

Claims 1-24 were rejected as being indefinite for the following reasons:

Claim 1 was believed indefinite because the Examiner believed that it was not clear which of the electrode areas is being referred to by the term "the electrode area" in line 6. The claims has been amended as suggested by the Examiner to read "the electrode areas".

Claim 1 was believed indefinite because the term "the first and second end" at line 9 lacks antecedent basis within the claim. The term as been changed to: "a first and second end".

In Claim 1 at line 12, the term "the strip" was believed indefinite and the Examiner suggested the amendment "gel strip" which has been included.

Claim 4 was believed indefinite for the recitation "the delimiting wall" as it lacked positive antecedent basis. The Claim has been amended to be dependent upon Claim 2 which does provide antecedent basis for "a delimiting wall".

Claims 5 and 6 were believed indefinite because the term "the electrode bridges" lacked positive antecedent support. Claim 5 has been amended to refer to "a conducting/carrying

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electrode bridge” which has clear antecedent basis in Claim 4. Dependent claim 6 is now believed definite.

Claim 13 was believed indefinite because it is dependent upon any of the preceding claims and does not set forth process steps. The claim has been amended to include specific steps.

Claim 14 was believed indefinite because “the bridges” at line 8 and “the electrode bridges” at lines 12-13 lack antecedent basis. The Claim has been amended to include antecedent basis.

Claim 16 was believed indefinite because “the electrode area” at each of lines 7 and 9 lacks antecedent basis. The claim has been amended as suggested by the Examiner to read “an electrode area of the electrode trough”. And at line 9, the term “the trough” was amended to read “the electrode trough”.

Rejection under 35 U.S.C. §101

Claim 13 was rejected under 35 U.S.C. §101 because the claimed recitation of the use resulted in an improper definition of a process. Claim 13 has been deleted, thus rendering the rejection moot.

Rejection under 35 U.S.C. §102(b)

Claims 1-5 and 7-13 were rejected under 35 U.S.C. §102(b) as anticipated by Kaplan et al. U.S. Patent 4,151,065 and Claims 1-13 were rejected as anticipated by Williams et al, WO 99/33550.

To be anticipatory under 35 U.S.C. § 102, a reference must teach each and every element of the claimed invention. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986). “Invalidity for anticipation requires that all of the elements and limitations of the claim are found within a single prior art reference. ... There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.” *See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991).

The subject matter of the presently claimed invention is directed to an electrophoresis apparatus for carrying out the first dimension of a two dimensional gel electrophoresis. The apparatus allows for one or more gel strips (such as IPG gel strips) to be rehydrated and electrophoresed and thus has a plurality of troughs for the placement of the gel strips.

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Claim 1 also requires an electrode including “contact points adapted to contact either the gel strip in the electrode areas near a first and second end of the gel strip or a conducting or current carrying electrode bridge material which is in contact with the gel strip in the electrode areas”.

Kaplan et al’s slab gel apparatus

The apparatus of Kaplan et al. is a gel slab apparatus for providing the second dimension of the 2 d gel and, as such, the configuration of the apparatus is different from the claimed invention in the following ways:

1. The apparatus of Kaplan et al. is configured to receive a single gel slab, not one or more gel strips as claimed in all of the presently pending claims. A gel slab would not fit into an apparatus configured to receive a gel strip and vice versa.
2. The apparatus of Kaplan et al. has a single trough configured to receive the gel slab, not a plurality of troughs as claimed in Claim 1 and its dependent claims.
3. In the apparatus of Kaplan et al. as shown in Figure 2 the slab does not extend into the electrode areas 74, and in particular does not extend beyond the lateral walls 26 and 28. In contrast, the apparatus as claimed in Claim 1 has an electrode with “contact points adapted to contact either the gel strip in the electrode areas near a first and second end of the gel strip or a conducting or current carrying electrode bridge material which is in contact with the gel strip in the electrode areas.”
4. Kaplan does not disclose any structure for delimiting the rehydration area of each trough from the electrode areas, as claimed in all of the presently pending claims. This aspect of the presently claimed invention is illustrated in the present specification in Figure 2b, wall 18 “which retains the rehydration solution. This prevents capillary movement from the rehydration area onto the electrode bridge region 20.”

As stated above, to be anticipatory, a reference must teach each and every element of the claimed invention. Kaplan et al. does not teach an electrophoresis apparatus configured to receive a plurality of gel strips, nor does Kaplan et al teach that the gel strips are contacted at

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both ends with a with a bridge material in contact with the electrode. Nor does Kaplan et al teach a means for delimiting the rehydration area of each trough from the electrode areas. For these reasons, Kaplan et al does not anticipate the claimed invention and Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §102(b).

The electrophoresis apparatus of Williams et al.

Williams et al is a 2d electrophoresis apparatus, but Williams et al. does not disclose any means for delimiting the rehydration area of the trough from the electrode area as is required by Claim 1 and can be seen in the presently claimed invention in Figure 2b, wall 18. In Williams et al, as is clearly shown in Figures 2 and 3, the base of the troughs of each tray are entirely planar. The item 43 shown in Figures 2 and 3 is not a wall but an electrode wire which is mounted for rotation into and out of the trays. The electrodes are wires and will not serve to delimit the rehydration area of the trough from the electrode area, as required by all of the presently pending claims.

Thus, Williams et al does not teach each and every element of the claimed invention and Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §102(b).

Conclusion

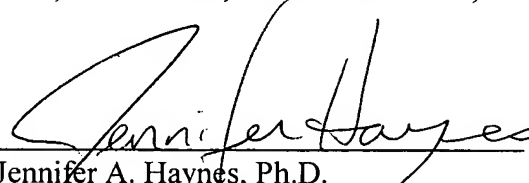
Should there be any questions with respect to the above-identified patent application, the Examiner is respectfully requested to contact the undersigned at the telephone number appearing below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: Dec. 3, 2004

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AMENDMENTS TO THE DRAWINGS

Please replace Figure 2b with the enclosed Figure 2b in appendix A.